

ABSTRACT OF THE DISCLOSURE

Despite advances in recent years in the area of mandatory access control in database systems, today's information repositories remain vulnerable to inference and data association attacks that can result in serious information leakage. Without support for coping against these attacks, sensitive information can be put at risk because of release of other (less sensitive) related information. The ability to protect information disclosure against such improper leakage would be of great benefit to governmental, public, and private institutions, which are, today more than ever, required to make portions of their data available for external release. In accordance with the invention, a solution to the problem of classifying information by enforcing explicit data classification as well as inference and association constraints is provided. We formulate the problem of determining a classification that ensures satisfaction of the constraints, while at the same time guaranteeing that information will not be unnecessarily overclassified.

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